



DOMINION

ANNUAL REPORT

OF

Department of Agriculture

FOR THE YEAR

1944.



REPORT ON THE WORK OF THE DEPARTMENT OF AGRICULTURE

FOR THE YEAR

1944.

TABLE OF CONTENTS.

PART I. — AGRICULTURE IN THE COLONY

	Page
STAFF	1
POLICY	1
WEATHER CONDITIONS	1 2
PRODUCTION AND EXPORT	2
PESTS AND DISEASES	2

PART II. — WORK OF THE DEPARTMENT

PUBLIC GROUNDS AND BOTANIC GARDENS ...	3
EXPERIMENT STATION	4
PLANT DISTRIBUTION	4
PLANT INTRODUCTIONS	5
LIVESTOCK	5-6
EXTENSION WORK	6-7
SOIL CONSERVATION	7
AGRICULTURAL EDUCATION	7-8
PUBLICATIONS	8
LABORATORY	8
ACKNOWLEDGEMENTS	8

APPENDIX I. — GOVERNMENT MARKETING DEPOT... 8-10

II. AGRICULTURAL LEGISLATION ... 10

III. FOREST POLICY 10-11

Annual Report of the Department of Agriculture Dominica, 1944.

PART I. AGRICULTURE IN THE COLONY.

(For reasons of economy this report has been abridged in so far as it has been possible to do so without impairing the record of the year's activities. Furthermore in accordance with instructions from the Secretary of State, any information however apparently trivial, in connection with production levels, crop forecasts, imports and exports—of certain commodities—has been omitted.

More detailed information regarding any particular aspect of the work of the Department will be supplied to any interested person.)

STAFF.

The following additions and changes were made during the year : Mr. A. V. WAN PING on secondment from the Government of British Guiana was appointed Agricultural Assistant under Scheme D 53 as from 1st May, 1944. Mr. A. ISAAC, Senior Agricultural Instructor, accepted a transfer to St. Lucia and Mr. C. W. THOMAS, Agricultural Instructor, was promoted to fill the vacancy. Mr. O. R. ETIENNE was appointed Assistant Instructor as from 1st August, 1944.

POLICY.

The work of the Department has been concentrated on the implementation of Scheme D 53 which was inaugurated last year. The maintenance of soil fertility, improvement of agricultural methods and introduction of soil conservation measures are in the fore-front of the programme. The importance of maintaining maximum production of locally grown foodstuffs has been kept in view and the Department has done everything in its power to encourage this objective.

The Government Marketing Depot continued to operate on a war time footing.

WEATHER CONDITIONS.

(a) *General Climatic Conditions* were favourable to agricultural production.

(b) *Rainfall*.—81.12 inches was registered at the Botanic Gardens compared with 20 years average of 75.84 inches. The monthly distribution followed closely the average with exception of February which showed a relatively high precipitation.

(c) *Barometer*.—The highest reading recorded was 30.13 on 11th January, and the lowest 29.74 on 13th November.

(d) *Temperature*.—The highest maximum temperature recorded was 91° F. on 10th July and 23rd August and the lowest minimum 58° F. on 23rd February.

PRODUCTION AND EXPORT.

The monetary value of Exports was the highest recorded since 1920 and shows an increase of 46% over 1943. All the main products showed substantial increases. Vanilla maintained its position as second in importance to Limes. The following table summarises information relating to the main export products in comparison to the previous year.

VALUE OF EXPORTS.

<i>Product.</i>	<i>% increase in value of Ex- ports over 1943.</i>	<i>% of total Value of Exports 1943.</i>	<i>% of total value of Exports 1944.</i>
Limes & Lime Products ..	28.5	40.0	38.5
Vanillas	42.0	27.0	32.5
Citrus Fruit other than limes. .	48.0	3.5	5.0
Coconuts & Copra	34.5	6.0	6.0

The Dominica Banana Association was again subsidised by a grant from Colonial Development and Welfare, which enabled the industry to be maintained and was an important factor in solving the food problem. The Association purchased 41,219 bunches during the period September 1943 to August 1944.

PESTS AND DISEASES.

Citrus.—The incidence of Withertip of Limes (*Glæosporum limettico-lum*) was not as marked as the previous year. No severe outbreaks of Citrus Weevil (*Diaprepes spp.*) or fruit piercing moths were reported.

Vanilla.—The disease referred to in last year's report was again responsible for serious losses to growers, but the average incidence was lower due probably to weather conditions. The situation warrants the visit of a plant pathologist and it is hoped that arrangements can be made for one of the mycologists from the Imperial College of Tropical Agriculture to investigate the problem.

Bananas.—Panama Disease (*Fusarium cubense*).—The average monthly disease incidence for all districts was 2.35% infected as compared with 2.32% for the previous year.

Minor Crops.—Cabbages: In some districts Diamoned-backed moth (*Plutella Spp.*) caused some loss to growers.

Maize: The late planted crop suffered from attack by Corn Ear Worm (*Laphygma frugiperda*.)

PART II.
WORK OF THE DEPARTMENT.
PUBLIC GROUNDS.

Grounds at the Library, Memorial Park, Morne Bruce and Military Cemetery were maintained in good order.

BOTANIC GARDENS.

(a) *Decorative Section*.—This was maintained in attractive condition and a few minor improvements effected. Seed exchange and propagation of decoratives were on a reduced scale.

(b) *Economic Section*.—Crops grown in observation and multiplication plots comprise the following:—

- (i) Sweet Potatoes : Ten varieties were planted, of these Caroline Lee, V 52 and B 44 gave the best results.
- (ii) Yams : Twelve varieties were planted, eight of which were the same as last year and four others introduced from Antigua. The highest yielding varieties were Barbados Lisbon, Statia, Red Lisbon, Seal Top and Lisbon (Antigua).
- (iii) Pigeon Peas : Varieties Lasiba and Tobago introduced from Trinidad were tried for the first time. Results were promising.
- (iv) Wooly Pyrol (*Phaseolus vulgaris*): This crop has given good results in its first trial, and has possibilities as a short term cover crop.
- (v) Miscellaneous Beans: Stringless Beans, Bush Stringless Beans, Climbing and Lima Beans.
Twelve varieties were tested of these Kentucky Wonder (U.S.A.), Stringless Green Pod (U.S.A.), Bountiful (U.S.A.), Six Weeks Bush Bean (Antigua), and Best Pole Lima (U.S.A.) appear well adapted to local conditions.
- (vi) Sugar Cane : Variety B 4098 was established for multiplication.
- (vii) Manila Hemp : Nineteen plants of a new variety received from Trinidad were planted.
- (viii) Derris : The trial plots established last year continued to make satisfactory growth.

Fodder Grasses.—The plot planted in 1943 is now well established. It was cut on eight week rotation and provided a continuous supply of fodder throughout the year. It yielded at the rate of 65,024 lbs. per acre per year.

Cocoa.—Data concerning yield and self-compatibility continued to be recorded for selected trees. Individual tree records were also continued at Picard Estate. The establishment of a nursery plot of selected clones was commenced.

Rooting trials were continued.

EXPERIMENT STATION.

(a) *Limes*.—The crop amounted to 1,172 brls. as compared with 1,435 brls. for the previous year. Sale was by quarterly tender. For purposes of comparison the previous years prices are also quoted, the following prices being received each quarter:—

	1944	1943
1st. Quarter	9/6	12/6
2nd. „	9/6	12/6
3rd. „	10/6	9/6
4th. „	11/6	9/6

(b) *Cashew Nuts*.—The plot planted last year has made excellent progress, and the soil conservation measures adopted are proving successful.

PLANT DISTRIBUTION.

(a) BUDDED OR GRAFTED PLANTS.

Washington Navel	1,471 plants
Other Oranges	419 „
Grapefruit	116 „
West Indian Limes	5,199 „
Other Citrus	172 „
Avocado Pears	61 „
Mangoes	45 „
TOTAL	7,483 plants

OTHER ECONOMIC PLANTS.

Sour Orange Stocks	500 plants
Seville Orange Stocks	200 „
Wild Grapefruit Stocks	8,485 „
Rough Lemon Stocks	130 „
Nutmeg Seedlings	406 „
Cocoa Seedlings	1,118 „
Coffee Seedlings	1,266 „
Cocoa pods	74 pods
Fodder Grass	10,550 cuttings
Sweet Potato	27,890 „
Sugar Cane	7,756 „
Yams	8,733 plants
Miscellaneous	12 „
European Vegetable Seed	102 lbs.

(b) *Sugar Cane Nurseries*.—Of the five nurseries established last year four have proved successful and cuttings from these have been distributed to growers.

PLANT INTRODUCTIONS.

Maize		9 lbs.	I.C.T.A., Trinidad.
Yams		(5 vars.)	D.A., Antigua.
Tabernaemontana Citrifolia	1 pkt.		Agric. Expt. Station, Mayaguez, Puerto Rico.
Eucalyptus Citriodora		1 pkt.	Agric. Expt. Station, Mayaguez, Puerto Rico.
Dolichos Hosei		1 "	"
Bauhinia Variegata		1 "	"
" Reticulata		1 "	"
Calapogonium Coeruleum	1	"	"
Zea Mays (Var. U.S.D.A.—34)		$\frac{1}{2}$ lb.	"
Glycine Max Var. Seminole		$\frac{1}{2}$ lb.	"
Pineapple, Black Antigua		100 plants	D.A., Antigua.
Lettuce (Great Lakes)	1 pkt.		D.A., W. Is., Grenada.
Cauliflower		1 "	" " "
Cape Gooseberry	..	1 "	" " "
Pigeon Peas "Lasiba"	1	"	D.A., Trinidad.
" " "Tobago"	1	"	"
Sunflower (large)	1	"	Peasants Adviser.
Soya Bean (Venezuela Edible Cream)	1	"	"
Broom Corn	1	"	"
Hog Corn	1	"	"
Yam Bean	1	"	"
Ground Nuts (large)		$\frac{1}{2}$ lb.	"
Eddoes			"
Kaffir Corn			"
Manila Hemp	19 suckers		Plant Quarantine Station. Trinidad.
Wooly Pyrol			D.A., Trinidad.
Ornamentals Misc.	16 Vars.		Bronx Park, N.Y.
"	24 "		D.A., Trinidad.
"	31 cuttings		"

LIVESTOCK.

(a) *Stud Animals*.—Steps were taken to increase the number of stud animals and by the end of the year the following animals were on strength

Three	Grade Holstein-Zebu Bulls.
One	Thoroughbred Stallion.
Four	Bucks (Anglo-Nubian, Saennan & Toggenburg.)
Three	Rams (Black Headed Persians)

The return of services is set out below :

Animal.			Number of Services.
Bull	..	..	153
Goat	..	..	145
Sheep	..	..	93
Horse	..	..	5

(b) *Rabbits*.—Interest in rabbit rearing is on the increase as a result of the Department's efforts in this direction. Rabbitry has been established at five Centres, and during the year 154 services have been given and 56 rabbits distributed.

(c) *Poultry*.—Pure-bred Rhode Island Reds, White Leghorns and Barred Plymouthrocks were obtained from Barbados through the good offices of the Department of Science and Agriculture, Barbados. Six pens were maintained during the year and 717 eggs distributed.

EXTENSION WORK.

This consists in the supply of advice to all growers—planters and peasants—through personal visits, demonstration plots, agricultural shows and all other appropriate measures. Its aim is to increase the efficiency of all agriculturists, and is in fact one form of agricultural education.

(a) *Advisory*.—The policy of making contact with the peasantry in their own surroundings was continued. Visits were made to individual holdings and estates by all members of the Staff, and it is considered that some progress has been made in earning the confidence of the planting community. It is gratifying to record the increased use of contour drains and the more common use of shelters for livestock with a resultant increased use of farm yard manure.

(b) *Investigational & Demonstration Centres*.—The establishment of these centres continued to receive priority of effort and in spite of the many difficulties attendant on construction work during war time, centres for Marigot and La Plaine districts were completed early in the year. Sites were acquired in three other districts, i.e., Grand Bay, Colihaut and Portsmouth, and satisfactory progress made in the layout of the stations and construction of buildings. These Centres will provide the following services:

- (i) Nurseries for the distribution of plant material.
- (ii) The keeping of stud animals.
- (iii) Demonstration of principles of mixed farming including conservation measures.
- (iv) Observation plots of new crops and new varieties of established crops.
- (v) Investigational work. (This will be limited in the first instance to three centres.)

These objectives are being put into operation as circumstances permit.

(c) (i) *Experiments on Estates*.—Two experiments were put down on estates during the year. One sugar cane variety trial and one phosphate manurial trial on derris, both designed in accordance with the modern concept of experimental layout.

(ii) *Trial plots of Manila Hemp (Musa Textilis)*.—In addition to the three trial plots established in 1943, three others were started during the year.

(d) *Agricultural Exhibition*.—The agricultural event which attracted the greatest interest in the community was an Exhibition held at the Botanic Gardens and Windsor Park, Roseau, on October 24th, 25th and 26th, the first show held since 1932. In addition separate Livestock Shows were held in the out-districts of Castle Bruce, La Plaine, Colihaut and Marigot.

The quality of the exhibits attracted very favourable comment, and it was generally judged to be the best show of its kind organised in the Island. Special features of the Exhibition were (a) the Health Section organised by the Medical Officer of Health, which was designed to give information on nutrition and the prevention of the more prevalent communicable diseases in Dominica. (b) Education Section was organised by the Education Officer and all schools both elementary and secondary in the island sent exhibits. (c) Agricultural Department Section was arranged in three exhibits viz. (i) the work accomplished in setting up district agricultural centres with funds provided by Development and Welfare (ii) the principles of mixed farming. The close relationship between good housing and good farming was emphasized. (iii) The activities of the Marketing Depot were demonstrated by means of an attractive display of citrus and other fruit packed as for export.

SOIL CONSERVATION.

The plan of campaign outlined in the previous year's report was continued. It is a matter for some satisfaction that the dangers of soil erosion are being appreciated in some quarters. Unfortunately as was to be expected, there has been no noticeable reduction in indiscriminate cutting of forests. It is gratifying to record, however, that a report on Forestry in Dominica has been made under the direction of the Conservator of Forests, Trinidad. This outlines a forestry policy including draft legislation and detailed proposals for its implementation. It is considered of such importance to the future welfare of the Colony that a summary of the recommended forest policy forms the subject matter of Appendix III of this report.

AGRICULTURAL EDUCATION.

(a) *Pupil Apprentice Course*.—16 pupils were in attendance throughout the year. 5 completed the course and 3 new ones were enrolled.

(b) *Refresher Course*.—A refresher course for Agricultural Instructors was held in Roseau from September 2nd to September 6th.

(c) *Scheme D 200*—Colonial Development & Welfare.—Undermentioned selected candidates underwent the following courses of instruction during the year:—

(1) Mr. E. O. LE BLANC, Assistant Instructor, a course of six weeks with the Bee Instructor of the Trinidad Agricultural Society.

(2) Mr. H. C. BURTON, Foreman, Botanic Gardens, attended for two months training at the Royal Botanic Gardens, Trinidad and Cocoa Nursery, Trinidad Department of Agriculture.

(3) Messrs. A. C. and C. A. WINSTON, Agricultural Instructors, attended for three months at the Government Stock Farm, Trinidad.

(4) Mr. G. J. STEDMAN, Peasants' Adviser, visited Grenada to study straw plaiting and St. Vincent to study extension work and anti-erosion control.

(d) *Grammar School Boys*.—Lectures and demonstrations were given fortnightly by the Assistant Agricultural Officer.

(e) *Periodicals*.—The following periodicals were received and circulated amongst the staff:—

The Smallholder and Home Gardening.
 The Journal of the Jamaica Agricultural Society.
 The Farm Journal of British Guiana.
 Proceedings of the Agricultural Society of Trinidad and Tobago.
 The Negro Farmer.
 The American Small Stock Farmer.

PUBLICATIONS.

The following pamphlets were prepared by the Agricultural Department for local distribution :

Pamphlet Series A.

- I. Cattle.
- II. Poultry.
- III. Fodder Grasses.

LABORATORY.

Return of chemical analyses and tests are set out hereunder :

<i>Product.</i>	<i>Type of Test.</i>	<i>No. of Samples.</i>
Milk	Analysis	44
Lime Oil	Sp. Gravity . .	—
Lime Juice, Conc. .	Citric Acid content	7
Lime Juice, Raw ..	" " " "	14
Bay Oil	Phenol content ..	7

ACKNOWLEDGEMENTS.

I desire to record the thanks and appreciation of the Staff of the Department to all those officials and unofficials alike who have assisted and co-operated in our continued efforts to carry out the Agricultural Policy of Government. The Local Press has assisted materially by printing Agricultural Notices and giving publicity to the work of the Department. The thanks of the Department is also extended to planters for their hospitality to visiting officers. Finally I wish personally to express my thanks to the Staff of the Department for their unstinted support.

L. L. DE VERTEUIL,

Agricultural Superintendent.

APPENDIX I.

GOVERNMENT MARKETING DEPOT.

WAR EMERGENCY WORK.

The Department continued to operate on a war time footing and priority attention was given to the Emergency duties assigned to this office, (a) Price Control, (b) Slaughter of Livestock, (c) Meat and Fish Control, including rationing (d) Guarantee to purchase and marketing of Surplus Products (e) Subsidy to Livestock (f) Advances to Butchers.

The shortage of Livestock continued and as a further means of more

complete control the Officer-in-Charge was appointed an Authorised Agent for the purpose of issuing licenses to slaughter livestock in the Roseau, Western and Grand Bay Districts.

Due to the scarcity of ground provisions offered for sale there was little business done under purchasing of surplus products.

FRUIT TRADE.

Though the operations of the Depot were necessarily limited there was an encouraging increase in business and packing operations during the year, which, except in the case of one shipment to Bermuda, were concerned with shipments to West Indian Markets.

The services of an Auxiliary Schooner proved of much assistance to the fruit trade and in the early half of the year the Agricultural Superintendent visited Barbados as a representative of the Fruit Trade Committee for the purpose of establishing an Agency for the handling of fruit packed and shipped by the Depot to that market. Reduced wholesale and retail prices were agreed upon in collaboration with the Retailers in that island.

This marketing organisation was mainly responsible for the increase in the Depot activities and the tangible results may well serve as encouragement to further explore the possibilities of this market.

Regular consignments continued to be forwarded to the St. Kitts and Antigua markets.

Towards the end of the year one consignment of 2,350 crates of citrus fruits was packed for shipment to Bermuda by a private concern.

The total number of crates packed during the year shows an increase of 5,746 crates over the 1,187 crates of fruit packed in 1943.

PRICES.

The prices for fruit shipped to Barbados and other West Indian Islands were satisfactory, except in the case of Grapefruit. Agents' reports point to the difficulty of selling grapefruit alongside oranges. Grapefruit had to be carried in store for long periods resulting in abnormal wastage which was reflected in the returns for this fruit.

VANILLA INSPECTION.

All sales of Vanilla in Roseau were supervised and recorded by the staff of the Depot. The total exports of cured vanillas was inspected for quality, and weights checked, prior to shipment.

GENERAL.

The routine work of the department continued, the demand for ice necessitating the continuous run of the Cold Storage and Ice making plant.

Two consignments of onions, tomatoes and shallots received from the Government Marketing Depot, Montserrat, were sold in the local market and in response to an offer from Antigua six tons of corn were imported for disposal to stock and poultry raisers.

EXHIBITIONS.

(a) *Local.*—At the Agricultural and Health Exhibition held in October at the Botanic Gardens, the Depot packed and displayed all varieties of

available fruit—principally Citrus fruit—in a separate Departmental Stall and also packed for private Estates, Exhibits of fruit and other products.

(b) *Barbados*.—The Depot also packed 20 crates of Citrus fruit and Avocado Pears for display as Dominica Exhibits at the Industrial Exhibition held in Barbados in December.

G. A. WINSTON,

*Officer-in-Charge,
Government Marketing Depot.*

APPENDIX II.

AGRICULTURAL LEGISLATION.

Plant Protection (Importations) (Amendment) (S.R. & O. No. 5 of 1944).

APPENDIX III.

FOREST POLICY.

[*Extract from "Forestry in the Windward Islands" by Conservator of Forests, Trinidad*]

A Forest Policy in an Island so undeveloped as Dominica cannot be considered separately from a general Land and Conservation Policy in which agriculture and forestry, conservation, allocation and management of the land would be inextricably interwoven. It would not be possible to state a sound forest policy for the island without the prior statement of a land and conservation policy, since, as has already been stressed, far too little is known about relevant factors. It is proposed, therefore, to suggest the forest policy in two parts: first, a long term forest policy, which will depend upon the drafting of a land and conservation policy in due course and will lay down general principles for optimum forest administration, and secondly, a short term forest policy which will define certain palliative measures capable of immediate application.

The long term forest policy advocated for Dominica is as follows:—

Scientific Survey.

To assist in carrying out as soon as possible in collaboration with other Departments concerned a complete scientific survey of Dominica, including topographical, cadastral, soil, botanical, ecological and agronomic surveys, in order to provide the necessary data for land planning.

Land Allocation.

On completion of the scientific survey to draw up in collaboration with other Departments and interests concerned a complete land allocation and conservation policy for Dominica.

Forest Reservation.

To effect the permanent reservation as forest of all areas which may be allotted to forestry under the land allocation policy.

Forest Management.

To manage these Forest Reserves in such a manner that, while still fulfilling their protective functions in the interests of soil and water conservation, they may at the same time provide the maximum outturn of forest produce on the basis of a sustained yield.

Utilisation.

To effect the fullest possible utilisation of the products of the forests subject to the requirements of forest management and to encourage the most economical use of lumber.

Research.

To carry out such experimental work as may be necessary to implement the forest policy.

Education.

To educate and train the subordinate forest staff and educate all classes of the community to an understanding of the benefits and value to the community of forests managed on a sound basis.

Private Forestry.

To encourage and assist in every possible way the owners of private forests, woodlands and plantations, so that these may be managed in the most economical manner, and to prevent wastage and destruction of forest resources on private land.

Protection of Nature.

To include within the scope of forestry projects for the introduction and protection of game animals, birds and fish and for the preservation of localities of natural scenic or scientific interest.

The short term forest policy advocated for Dominica is as follows:—

Forest Conservation.

Pending the allocation of Forest Reserves under the land allocation policy, to preserve from spoliation all forests owned by the Crown and to bring squatting and the felling of timber under control.

Forest Management.

Pending completion of the land policy to permit the cultivation of Crown Lands, and the cutting of timber under licence, with collection of fees and royalties under such management as will prevent depletion of resources.

Staff.

To secure the appointment of a field staff adequate to undertake the execution of the forest policy.

Land Usage.

To co-operate with all other land interests in the achievement of optimum land usage and in all projects for soil and water conservation and the prevention of erosion.

Utilisation.

Research.

Education.

Private Forestry.

Protection of Nature.

To begin to implement immediately, so far as is possible, the long term forest policy under these heads.

It is recommended that the execution of both long and short term policies be undertaken simultaneously.

